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Remarks

The undersigned appreciates the Examiner's taking the time on September 14, 2005 to briefly discuss the tack-free nature of the coating formed in the claimed invention. This is not necessarily an issue, as discussed further below.

The allowability of claims 10 and 15 in independent form is again gratefully acknowledged. However, these claims should be allowable in dependent form for the reasons set forth below.

Withdrawn claims 1-5 are cancelled, without prejudice, herein. This is permitted under Rule § 1.116(b)(1), which states that after a final rejection, "[a]n amendment may be made canceling claims".

The present response amends independent claims 6 and 11 to more clearly recite that the hot melt is cured to form a coating in step (iv). This is supported by the specification, e.g., the paragraph bridging pages 5 and 6. This amendment is not seen as limiting/changing the scope of the claims, since these claims already included this recitation. Another reason the amendment should be acceptable under 37 CFR 1.116, is that it would place the application in better form for consideration in the event an appeal is necessary.

Claims 6-9, 11-14, 16 and 17 continue to be rejected under 35 U.S.C. 103(a) as allegedly being unpatentable based on Karim. This rejection is respectfully traversed.

The claimed invention relates to a process for forming a coating. In contrast, Karim discloses adhesive compositions for adhering two substrates together.

This distinction is apparently disregarded in the Office Action, which states that because "the adhesive composition of Karim is coated on the substrate", "it is a coating, regardless of its composition or ultimate end-use." OA p.4. It is respectfully submitted that it is necessary to give patentable weight to the

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distinction between adhesives and coatings based on the definitions thereof (see attached reference) and in accordance with established principles of 103 rejections, as discussed below.

An adhesive would not be used as a coating. This is clear from the attached reference's explanations of the differences between coatings and adhesives. Coatings Technology Handbook, 2ND Ed., D. Satas and A. A. Tracton, 2001, p. 396 (attached). According to the Coatings Technology Handbook, "[a] coating must adhere to only one substrate", while "an adhesive must adhere to one substrate, then to a second substrate." Id. Also, because a coating is exposed to the elements, certain performance properties are required of it. On the other hand, these performance properties are not required of an adhesive, since it is "protected to a certain degree by being sandwiched between two substrates." Id.

The Coatings Technology Handbook goes on to identify additional distinctions between coatings and adhesives, all of which demonstrate that the skilled artisan would not use Karim's adhesive composition in a process of forming a coating, because there is no reason to think that an adhesive composition would properly function as a coating.

In summary, it is submitted that a prima facie case of obviousness has not been established since there is no reasonable expectation that an adhesive could successfully be used to form a coating. One of the three requirements for establishing a prima facie case of obviousness is a reasonable expectation of success, which must "be found in the prior art and not based on applicant's disclosure." MPEP 706.02(j), citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The fact that Karim identifies its composition as an adhesive must be considered in making a determination of obviousness; its composition or ultimate end-use cannot be disregarded, as it is in the Office Action. OA p.4. It is well established that "prior art must be considered in its entirety, including disclosures that teach away from the claims," MPEP 2141.02 VI., and that "the proposed modification cannot change the principle of operation of a reference." MPEP

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2143.01 VI. Thus, Karim's identification of its composition as an adhesive must be considered in analysing the reference and its role in an obviousness rejection. Also, Karim's composition cannot be changed from an adhesive to a coating in making an obviousness rejection, because that would change its principle of operation, according to the distinctions outlined in the attached Coatings Technology Handbook.

In accordance with the above discussion, it is respectfully submitted that the claimed invention overcomes rejection based on Karim.

For the sake of brevity, any statements in the Office Action not specifically discussed herein are not agreed to thereby.

Please do not hesitate to contact the undersigned if there are any outstanding issues in this case.

Respectfully submitted,

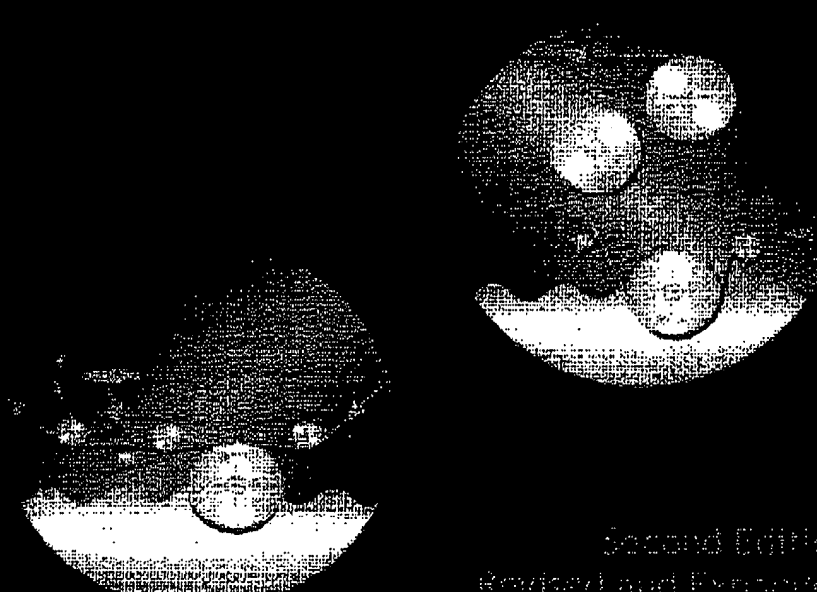


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Encl. Coatings Technology Handbook, 2ND Ed., D. Satas and A. A. Tracton, 2001, p.396.

Coatings Technology Handbook



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edited by
D. Satas
Arthur A. Tracton

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is still commonly used, the ability to protect this metal from corrosion remains an important requirement.¹²

4.1.3 Maintenance Coatings

Coatings are required for bridges and storage tanks, where again, properties of corrosion and humidity resistance are required.

4.1.4 Wood Coatings

Coatings for boards destined to be used in furniture and kitchen cabinets require blocking and detergent resistance, sandability, and resistance to grain raising.

4.1.5 Business Machines

Coatings for calculators, typewriters, copy machines, and analytical instrumentation are common examples in the business machine category. Performance required includes chemical and solvent resistance and adhesion to plastics [e.g., polycarbonate, polyphenylene oxide, acrylonitrile-butadiene-styrene (ABS)].

4.2 Adhesives

Both solvent and emulsion acrylic adhesives are extensively used in the industry, but before discussing adhesives, we need to address the fundamental difference between a coating and an adhesive. A coating must adhere to only one substrate; an adhesive must adhere to one substrate, then to a second substrate. A coating, once applied, is exposed to the elements and must withstand abrasion, maring, solvents, water, and heat. It may require high gloss, and other special properties, as well.

An adhesive is protected to a certain degree by being sandwiched between two substrates. It, therefore, does not have to have some of the performance properties that must be built into a coating. It must ideally have a bond strength high enough to fracture or tear at least one of the substrates. In many cases, the bond strength should not be materially affected by heat, solvents, or water. Therefore, an adhesive must not only have good anchorage to both substrates (adhesive strength), it must also have high enough cohesive strength to fracture or tear one of the substrates upon delamination. Thus an adhesive must balance adhesive strength with cohesive strength.

Another basic difference between emulsions (coatings and adhesives) is in their film formation properties. To have hard, tack-free, and heat-resistant coatings, the glass transition temperature of the polymer is intentionally designed to be higher than room temperature. The coating then requires a coalescing agent to form a clear continuous film. Adhesives form films at room temperature without the need for coalescing aids. A soft flexible polymer film is desired for an adhesive and this film should be thermoplastic (i.e., able to soften and flow repeatedly upon the application of heat). The film can subsequently be crosslinked through functional groups if heat and solvent resistance is desired.

Acrylic-based adhesives are normally employed where improved specific adhesion and/or resistance to yellowing from exposure to ultraviolet rays is required. Acrylics are used in three main areas: heat-sealable adhesives, laminating adhesives, and pressure-sensitive adhesives. These are discussed separately.

4.2.1 Heat-Sealable Adhesives

Heat sealing is used for bonding two substrates where one or both are impervious to water. Typically, the more heat- and solvent-resistant substrate is coated first and the solvent or

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